



X-RAY DEPARTMENT

4855 ELECTRIC AVENUE, MILWAUKEE, WISCONSIN 53201 . . . AREA CODE 414 383-3211

July, 1966

Adrian Kantrowitz, M.D. #2
Director of Surgical Services
Maimonides Hospital of Brooklyn
4802 Tenth Avenue
Brooklyn, New York 10019

Dear Dr. Kantrowitz:

PACEMAKER WARNING - PLEASE READ

Through our continuous evaluation program we have learned of a case where there was no pacemaker impulse to the heart when a new pacemaker generator was plugged in to replace a depleted unit. Investigation showed that the generator was functioning normally, but the electrode was shorted in the connector.

Further investigation established that this can occur if care is not taken to grasp the electrode over the metal barrel. The attached photograph indicates the right and wrong way to grasp the electrode when disconnecting the unit.

When the electrode is grasped below the connector barrel, the force required to break the connection must be carried by the insulation to the connector to pull it loose. The force carried by the inner insulation within the barrel in this instance may be high enough to pull it out of the barrel, permitting the bare wires to touch; thus shorting out the signal.

We have taken steps to further strengthen the internal junction to help prevent damage in this area. However, you can avoid this problem with your patients by grasping the electrode over the metal barrel.

You can also lessen the force necessary to disconnect the generator by pinching the silicone boot on the electrode (where it covers the silicone collar on the generator) with your fingers. This will tend to break the bonding action built up between the two parts. A blunt-tipped instrument such as a small probe can also be used to pry up the boot to loosen the seal.

This letter may not reach all the personnel in your institution who may have occasion to connect or disconnect the pacemaker; therefore, we would appreciate it if you would pass this warning around to all affected personnel.

## Page 2

This illustrates the value of your cooperation in furnishing information to us through our continuous evaluation program. It helped us to identify a problem area and advise those concerned of steps to take to avoid future difficulty.

Should you have any questions or comments about this procedure, please contact our local X-Ray Office.

Cordially,

W.H. Duehren

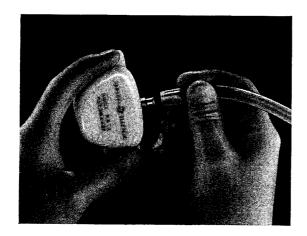
Advanced Technical Projects

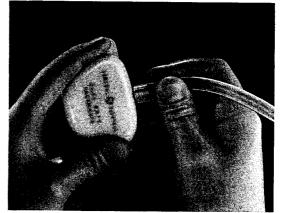
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## CA TION

When engaging or disengaging the electrode to the pacemaker generator, grasp the electrode connector with thumb and index finger over the brass barrel of the electrode. This technique will prevent undue stress at the junction of the silicone tubing and the metal barrel.

## DO NOT GRASP ELECTRODES THIS WAY





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